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Topic Analyzer: A GSS Tool For Idea Generation And Idea Analysis

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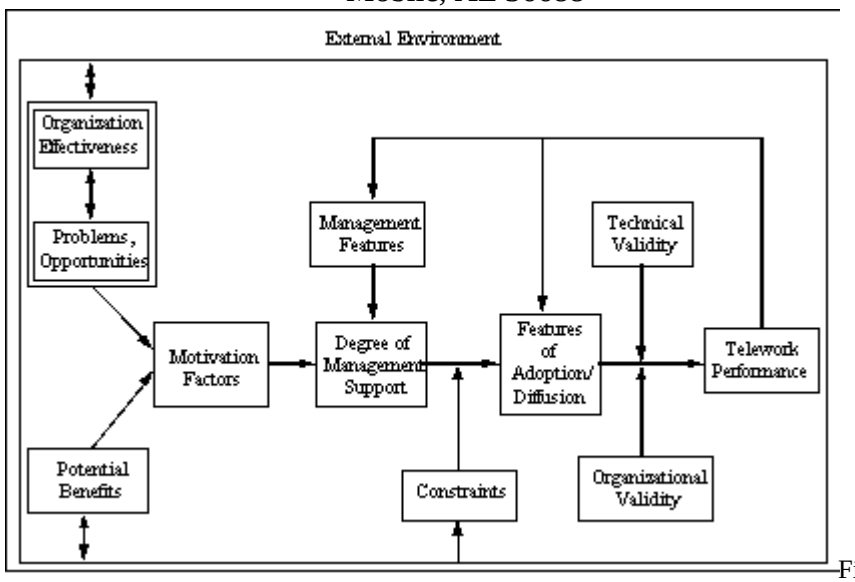

Figure 1

Topic Analyzer (TA) is a GSS tool for idea generation and information evaluation. The tool was inspired by GroupSystems' Topic Commenter (Dennis, et al., 1988; Nunamaker, et al., 1991) and GroupMatrix (Hayes, 1991) to provide support for comment generation, comment assessment, and immediate consensus feedback (see Figure 1). This combination of functionality allows for validation of the statements as they are entered during a session. Without such validation, anyone reading the meeting record may mistakenly assume that all statements made during the session are truth or reflect the consensus of all participants. TA enables the participant to supply a concrete measure of his support for every comment, thus validating the meeting record.

A facilitator sets up a TA session by identifying a number of topics to be addressed by a group. A topic appears on the title bar of each window of a multiple document interface (MDI) application. Each of these windows contains a list box of all the statements submitted by the participants (or preloaded by the session sponsor) for that topic. During the session, participants submit and evaluate comments. The participant uses a 5-point Likert scale ranging from strongly agree to strongly disagree to evaluate a comment. The list box can display (approximately) the first 75 characters of a comment, but the participant can read the entire comment by selecting the comment from the list box, which causes the full text to be displayed in a read-only box at the bottom of the window. The participant may also vote on the highlighted item by selecting a radio button which most closely expresses his opinion (strongly agree to strongly disagree). After, *and only after*, a participant has expressed his opinion about a comment, he is able to view the distribution of opinions. The votes are displayed as a bar chart within the list box area and counts above each radio button. The level of agreement/disagreement (based on standard deviation above or below a threshold) is indicated by coloring the entire bar chart red (disagreement) or green (agreement).

It is not necessary to depend on participants to generate all the comments; the facilitator can preload comments to spark ideas and guide the discussion. This is particularly helpful for providing participants

with examples of comments which can be appropriately evaluated (the comment is unambiguous) and can also be used to demonstrate the desired level of detail (higher specificity). Also the preloaded comments can stimulate the participant's memory and remind him of related issues. James Wetherbe points out that it is much easier to remember additional jokes after hearing a few; the stimulation allows for better recall (Wetherbe, 1991). Preloading comments can also prevent participants from focusing on the most recent events.

TA has been used successfully with several student groups within the School of CIS at the University of South Alabama to evaluate course content and instructor performance. Students are able to understand and use the tool effectively with as little as 10 minutes of training. Student comments indicate that most of them consider the assessment feature an important improvement in the process, particularly for improving confidence that the meeting record reflects the relative opinion of the group. Students are eager to discover whether their opinions are supported or rejected by the group. The anonymity provided by TA would be especially valuable to industry groups performing a strategic analysis.

TA uses a database engine to store the data in .dbf format tables. This allows for easy export to DBMS and spreadsheet programs for custom formatting and ad hoc analysis. For research purposes, the tool maintains a log of the voting pattern for each participant based on a randomly assigned login identification code. This allows researchers to study voting patterns and determine if participants are influenced by the dynamic feedback TA provides.

TA was developed for use in a Netware environment, but does not employ any Netbios routines limiting its use to any particular LAN hardware or software. A single 486-class or Pentium computer with a VGA (or better) monitor set up with Windows 3.1 or 95 and at least 5 MB of hard disk space free will suffice as the minimum hardware configuration.

This software demonstration will show how a meeting facilitator would set up and run a TA session. Since multiple copies of TA can run on a single machine, we can provide a simulation of what would happen during a TA session with several participants using a single computer. The software was designed and developed solely by the authors of this paper and is intended as a research tool. Hayes and Daniels (1996) describe the rationale for the tool and present a research study designed to evaluate the tool.

References

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